

Contents

[Introduction](#)

[Problem](#)

[Solution](#)

[Recommended Reading](#)

Introduction

This document clarifies the confusion around polling of "pethMainPseConsumptionPower" OID to get the usage power on an interface of a Cisco Switch from Network Management System (NMS).

Problem

Simple Network Management Protocol (SNMP) Object Identifier (OID) - 1.3.6.1.2.1.105.1.3.1.1.4 (pethMainPseConsumptionPower), when polled to get "usage power" in Watts returns value that does not match with the Command Line Interpreter (CLI) generally used on the Cisco switch.

Example:

```
NMS> snmpwalk -c public -v2c 10.106.36.239 1.3.6.1.2.1.105.1.3.1.1.4
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.2.1 = Gauge32: 370
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.3.1 = INTEGER: 1
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.4.1 = Gauge32: 121
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.5.1 = INTEGER: 0
```

```
Switch# Show power inline
```

```
Available:370.0 (w)   Used:279.9 (w)   Remaining:90.1 (w)
```

Interface	Admin	Oper	Power (Watts)	Device	Class	Max
Fa0/1	auto	off	0.0	n/a	n/a	15.4
Fa0/2	auto	off	0.0	n/a	n/a	15.4
Fa0/3	auto	off	0.0	n/a	n/a	15.4
Fa0/4	auto	off	0.0	n/a	n/a	15.4
Fa0/5	auto	on	3.3	IP Phone 7821	1	15.4
Fa0/6	auto	off	0.0	n/a	n/a	15.4
Fa0/7	auto	off	0.0	n/a	n/a	15.4
Fa0/8	auto	off	0.0	n/a	n/a	15.4
Fa0/9	auto	on	3.3	IP Phone 7821	1	15.4
Fa0/10	auto	off	0.0	n/a	n/a	15.4
Fa0/11	auto	off	0.0	n/a	n/a	15.4
Fa0/12	auto	off	0.0	n/a	n/a	15.4
Fa0/13	auto	on	3.3	IP Phone 7821	1	15.4
Fa0/14	auto	on	13.7	IP Phone DX650	4	15.4
Fa0/15	auto	on	3.3	IP Phone 7821	1	15.4

The above behavior is seen on below hardware software versions:

Switch	Ports	Model	SW Version	SW Image
-----	-----	-----	-----	-----
*	1 52	WS-C2960+48PST-S	15.0(2)SE6	C2960-LANLITEK9-M
--				

Switch	Ports	Model	SW Version	SW Image
-----	-----	-----	-----	-----
*	1 26	WS-C2960+24PC-S	15.0(2)SE6	C2960-LANLITEK9-M
--				

Switch	Ports	Model	SW Version	SW Image
-----	-----	-----	-----	-----
*	1 52	WS-C2960S-48LPS-L	15.0(2)EX5	C2960S-UNIVERSALK9-M
	2 52	WS-C2960S-48LPS-L	15.0(2)EX5	C2960S-UNIVERSALK9-M

Solution

"pethMainPseConsumptionPower" returns power consumed by Power over Ethernet (PoE) for an interface. For switches like 2960 which has power sensing and policing capability, this object identifier will give **actual power** consumed by PoE devices. We can see this using the CLI "**show power inline police**" which gives "actual power" consumed, along with the port individual consumption (under "Oper Power" and also "Totals" at the end).

```
NMS> snmpwalk -v 2c -c public 10.106.36.239 1.3.6.1.2.1.105.1.3.1.1
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.2.1 = Gauge32: 462
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.3.1 = INTEGER: 1
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.4.1 = Gauge32: 23
```

```
SNMPv2-SMI::mib-2.105.1.3.1.1.5.1 = INTEGER: 0
```

```
Switch#show power inline police
```

```
Available:462.0 (w) Used:43.6 (w) Remaining:418.4 (w)
```

Interface	Admin State	Oper State	Admin Police	Oper Police	Cutoff Power	Oper Power
-----	-----	-----	-----	-----	-----	-----
Gi0/1	auto	on	none	n/a	n/a	5.7
Gi0/2	auto	on	none	n/a	n/a	3.9
Gi0/3	auto	on	none	n/a	n/a	5.2
Gi0/4	auto	on	none	n/a	n/a	8.7
Gi0/5	auto	off	none	n/a	n/a	n/a
Gi0/6	auto	off	none	n/a	n/a	n/a
Gi0/7	auto	off	none	n/a	n/a	n/a
Gi0/8	auto	off	none	n/a	n/a	n/a
Gi0/9	auto	off	none	n/a	n/a	n/a

Gi0/10	auto	off	none	n/a	n/a	n/a
Gi0/11	auto	off	none	n/a	n/a	n/a
Gi0/12	auto	off	none	n/a	n/a	n/a
Gi0/13	auto	off	none	n/a	n/a	n/a
Gi0/14	auto	off	none	n/a	n/a	n/a
Gi0/15	auto	off	none	n/a	n/a	n/a
Gi0/16	auto	off	none	n/a	n/a	n/a
Gi0/17	auto	off	none	n/a	n/a	n/a
Gi0/18	auto	off	none	n/a	n/a	n/a
Gi0/19	auto	off	none	n/a	n/a	n/a
Interface	Admin State	Oper State	Admin Police	Oper Police	Cutoff Power	Oper Power
-----	-----	-----	-----	-----	-----	-----
Gi0/20	auto	off	none	n/a	n/a	n/a
Gi0/21	auto	off	none	n/a	n/a	n/a
Gi0/22	auto	off	none	n/a	n/a	n/a
Gi0/23	auto	off	none	n/a	n/a	n/a
Gi0/24	auto	off	none	n/a	n/a	n/a
Gi0/25	auto	off	none	n/a	n/a	n/a
Gi0/26	auto	off	none	n/a	n/a	n/a
Gi0/27	auto	off	none	n/a	n/a	n/a
Gi0/28	auto	off	none	n/a	n/a	n/a
Gi0/29	auto	off	none	n/a	n/a	n/a
Gi0/30	auto	off	none	n/a	n/a	n/a
Gi0/31	auto	off	none	n/a	n/a	n/a
Gi0/32	auto	off	none	n/a	n/a	n/a
Gi0/33	auto	off	none	n/a	n/a	n/a
Gi0/34	auto	off	none	n/a	n/a	n/a
Gi0/35	auto	off	none	n/a	n/a	n/a
Gi0/36	auto	off	none	n/a	n/a	n/a
Gi0/37	auto	off	none	n/a	n/a	n/a
Gi0/38	auto	off	none	n/a	n/a	n/a
Gi0/39	auto	off	none	n/a	n/a	n/a
Gi0/40	auto	off	none	n/a	n/a	n/a
Gi0/41	auto	off	none	n/a	n/a	n/a
Interface	Admin State	Oper State	Admin Police	Oper Police	Cutoff Power	Oper Power
-----	-----	-----	-----	-----	-----	-----
Gi0/42	auto	off	none	n/a	n/a	n/a
Gi0/43	auto	off	none	n/a	n/a	n/a
Gi0/44	auto	off	none	n/a	n/a	n/a
Gi0/45	auto	off	none	n/a	n/a	n/a
Gi0/46	auto	off	none	n/a	n/a	n/a
Gi0/47	auto	off	none	n/a	n/a	n/a
Gi0/48	auto	off	none	n/a	n/a	n/a
-----	-----	-----	-----	-----	-----	-----
Totals:						23.4

The **USED** power column represent the amount of PoE allocated to ports..

The **AVAILABLE** power column represents the total amount of PoE in the system.

The **REMAINING** power column means (Available - Used)

Hence the correct command to be used to compare the output of SNMPWALK of

"pethMainPseConsumptionPower" is "show power inline police".

Recommended Reading

[Configuring Power over Ethernet](#)